

CEM EXAM TOPICS

11/2006

The following list provides prospective CEMs with a guideline for the scope of the multiple choice 4-hour CEM exam. We have provided references where applicable and appropriate, however, we assume that for most topics, prospective CEMs have access and are familiar with any relevant NDEP and US EPA guidance that addresses that topic.

- I. UST/AST
 - a. State Petroleum Fund
 - i. NAC 590.700 – 790
 - b. State and Federal UST/AST regulations
 - i. 40 CFR 280
 - ii. NAC 459.9921 - 445.9995
- II. Nevada Geology and hydrogeology
- III. RCRA
 - a. 40 CFR
 - i. 261
 - ii. 262
 - iii. 264 (Subpart B-F, I, J)
 - iv. 265 (Subpart B-F, I, J),
- IV. Emergency Response
 - a. Use of Emergency Response Guidebook
 - b. NV spill response notification requirements
- V. General understanding of the following federal laws: TSCA, FIFRA, NEPA, CWA, CERCLA, SDWA, CAA
 - a. Overall purpose
 - b. Types of media and/or chemicals each covers.
- VI. Health and Safety, PPE
 - a. Procedures
 - b. Levels
 - c. Types of equipment
 - d. Decontamination
- VII. Wells
 - a. Types
 - b. Construction
 - c. Characteristics
 - d. NV regulations
 - i. NAC 445A.844-849
 - ii. NAC 445A.856-858
 - iii. NAC 445A.891-896
- VIII. Superfund Regulations
 - a. 40 CFR 302, 312, 355, 370

- b. Purpose
- IX. Certification Programs
 - a. Standards of Practice
 - b. NAC 459.970-9729
- X. Risk Assessment and Toxicology
 - a. Purpose of risk assessments
 - b. When and how risk assessments are used
 - c. Familiarity with common toxicological terms (e.g. LD₅₀, dose response curve)
- XI. Sampling and Analysis
 - a. Field Equipment
 - b. Analytical methods
 - c. Field procedures
- XII. Common types of projects in NV (Be able to describe how they would be completed, pertinent regulations, field issues, technical/scientific reason on why they are problems.)
 - a. petroleum cleanups
 - b. tank removals
 - c. sampling
 - d. mining issues
 - e. remediation
- XIII. Characteristics of common pollutants at NV site cleanups (what types of characteristics)
 - a. Fate and transport in the subsurface
 - b. Effective remediation techniques
 - c. Toxicity
- XIV. AAI's/Phase I Environmental Site Assessments
 - a. What are they
 - b. When are they used
 - c. Topics within Phase I
- XV. Other regulations
 - a. NAC 445A.226-227 (action levels)
 - b. NAC 459.9973 (a-k)
- XVI. Other
 - a. Basic math and geometry
 - b. Use of USGS Topo Quads

The exam will be given from 9:00am –1:00pm. Part I of the examination will begin at 9:00am with 100 questions and then Part II has 100-110 questions. The examination is **CLOSED BOOK**. There is only **ONE** correct answer for each question. Scientific calculators will be provided. No personal calculators will be allowed.

The above outline covers suggested areas of study for the exam and is NOT all inclusive.